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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/634,081	08/04/2003	Maki Watanabe	121027-196	7401

35684 7590 05/16/2005

BUTZEL LONG  
350 SOUTH MAIN STREET  
SUITE 300  
ANN ARBOR, MI 48104

EXAMINER

HILL, LAURA C

ART UNIT	PAPER NUMBER
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3761

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
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10/634 081

EXAMINER

ART UNIT

PAPER

20050510

DATE MAILED:

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Commissioner for Patents

**Office Action Summary**

Application No.

10/634,081

Applicant(s)

WATANABE ET AL.

Examiner

Laura C. Hill

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/29/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Specification*

1. Claim 4 objected to because of the following informalities: on lines 11-12 "alternate crests and troughs" are referred to as "a crest 45 defined between each pair of *depressed zones* 44" in the instant specification, page 12, lines 17-18. Appropriate correction is required for an improved language consistency between the "troughs" of the claim and the "depressed zones" of the specification.
2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Disposable Wearing Article Having Alternating Narrow Strips with Varying Density Regions and Crests and Troughs.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

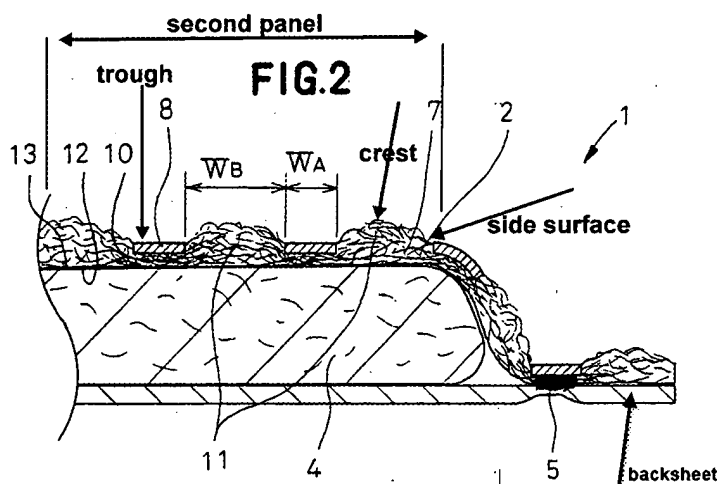
3. Claims 1-5 rejected under 35 U.S.C. 103(a) as being unpatentable over Mizutani et al. (US 5,578,024). Regarding claim 1 Mizutani et al. discloses a disposable pad 1 comprising an backsheet/inner sheet 3 facing the wearer's body, topsheet/outer sheet 2, and a body fluid absorbent core/first panel 4 interposed between backsheet/inner sheet 3 and topsheet/outer sheet 2, the absorbent core containing water-absorbent fibers for absorption of fluids (col. 2, ll. 43-45, figure 2), said disposable pad further comprising:

Said backsheet/inner sheet 3 is a liquid-impermeable plastic film and topsheet/outer sheet 2 of second panel is made of a liquid-permeable nonwoven fabric with a liquid-impermeable film on its upper surface [Note the second panel is defined to be the entire area including the topsheet 2 (col. 2, ll. 48-54 and figure 2); and

Said backsheet/inner sheet 3 and fluid absorbent core/first panel 4 underlying said inner sheet 3 and the topsheet/outer sheet 2 lacking portions in a longitudinal and transverse direction to define long elliptical apertures/voids 14, said apertures/voids 14 diffuse menstrual discharge longitudinally and transversely; said apertures/voids 14 are positioned in the low density liquid-pervious hydrophobic zones 11; a plurality of parallel alternating longitudinal high and low density zones/narrow strips 10, 11 which are in contact with an upper surface of absorbent core/first panel 4, said high density zones/narrow strips 10 having 1.4 times the density of low density zone 11; and a sealing line/spacer member 5 lying aside from narrow strips 10, 11 and is capable of spacing said first panel 4 and parts of the narrow strips 10,11 from said outer sheet 2 toward said inner sheet 3 (col. 3, ll. 1-3, 36-43 and 52-55, col. 2, ll. 45-48 and 65-67,

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figures 2-3). Mizutani et al. further discloses the topsheet/outer sheet 2 of pad 1 facilitates menstrual discharge to be guided longitudinally of the pad in the high density zones 10 and allow the zones 10 to be effectively utilized from end to end when fibers at least in the high density zones 10 are oriented longitudinally of the pad 1 (col. 3, ll. 23-28). Mizutani et al. further discloses menstrual discharge may be guided through the topsheet/outer sheet 2 (Note: outer sheet 2 contains high and low density zones 10,11) so that menstrual discharge may be guided through topsheet/outer sheet 2 into the absorbent core/first panel 4 (col. 3, ll. 11-14 and figure 2). Mizutani et al. further discloses that even after body fluids have been transferred from the low-density zones to high-density zones/narrow strips 10,11, the plastic film on the topsheet/outer sheet 2 effectively prevents the high-density zones and the core of being smeared with body fluids being seen there through (col. 4, ll. 1-8).



Mizutani et al. does not expressly disclose a *single* void being filled with a hydrophobic *second panel*, the narrow strips contacting a *lower* surface of absorbent first panel, the

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absorbent first panel density, or the spacing member extending *beyond a second panel*.

It would be obvious to one of ordinary skill in the art at the time the invention was made to modify Mizutani et al. to include a single void since the Mizutani apertures/voids in the disposable wearing article improve the transfer of menstrual discharge. It would furthermore be obvious to one of ordinary skill in the art at the time the invention was made that the narrow strips of Mizutani et al. contact a lower surface of absorbent panel since Mizutani et al. discloses parallel strips with alternating zones of high and low density for improved liquid distribution. It would furthermore be obvious to one of ordinary skill in the art at the time the invention was made that the narrow strips have a higher density than the water absorbent fibers in the absorbent panel since Mizutani et al. discloses the narrow strips/alternating zones of density in outer sheet that guide liquid distribution into absorbent core of first panel and since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boeschr*, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claims 2-3 Mizutani et al. discloses topsheet/outer sheet 2, with low and high density zones/narrow strips 10,11 located therein, contains thermoplastic synthetic fibers mixed with 3-20% by weight of hydrophilic fibers such as fiber pulps and further discloses high density zone 10 with a density 1.4 times higher than the density of zone 11 (col. 3, ll. 1-4 and 53-59). Mizutani et al. does not expressly disclose the first panel wt% and a density of the fibers in the first panel. It would be obvious to one of ordinary skill in the art at the time the invention was made to modify Mizutani with wt% and density values in the absorbent first panel as claimed since Mizutani et al. discloses

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the narrow strips/alternating zones of density with thermoplastic synthetic fibers in outer sheet that guide liquid distribution into absorbent core of first panel and since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boeschr*, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claim 4 Mizutani et al. does not expressly disclose but it would be obvious to modify Mizutani et al. to include a second panel as discussed in rejected claim 1. Mizutani et al. discloses a resin film 8 covering the upper surface of high-density zone 10 and 20-100% by weight thermoplastic synthetic fibers covering the upper surface of low-density zone 11 (col. 2, ll. 58-66). Mizutani et al. further discloses the top surfaces of low density zones 11 are higher than those of film strips 8 located on high density zones 10 and form mountain-or wave-like shapes, thereby forming repeated alternate crests lying adjacent to troughs so the pad 1 gives the wearer no feeling of wetness due to the absorbed quantity of menstrual discharge (col. 3, ll.19-33 and figure 2). Mizutani et al. further discloses the thermoplastic synthetic fibers 7 are exposed to side surfaces of said crests (figure 2). Mizutani et al. does not expressly disclose specific layers of the second panel being formed by thermoplastic synthetic film with fiber or by opened-cell polyurethane foam. The method of forming the wearing article is not germane to the issue of patentability of the device itself. Therefore, this limitation has been given little patentable weight.

Regarding claim 5 Mizutani et al. discloses the topsheet/outer sheet 2, which comprises a second panel structure, as discussed in rejected claim 1 and further discloses a liquid-pervious topsheet/outer sheet 2 with a thermoplastic synthetic fiber



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fabric 7 that covers the second panel (fig. 2). It would be obvious to one of ordinary skill in the art at the time the invention was made that the second panel includes a porous liquid-pervious thermoplastic synthetic resin sheet since the Mizutani et al. reference discloses liquid-pervious topsheet/outer sheet 2 which comprises the area of second panel and contains thermoplastic synthetic fiber for improved body fluid distribution.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Langdon et al. reference, US patent no. 5,500,270, is cited for showing a laminate for absorbent articles with spacers which separate first sheet from second sheet such that a capillary zone is created between sheets and apertures that provide a capillary gradient within the laminate material. The Tanzer et al. reference, US patent no. 5,411,497, is cited for showing an absorbent article with a capillary force differential provided at an interface between retention portion and a material adjacent the bodyside of retention portion and alternating pockets of superabsorbent material. The Drevik reference, US Pregrant Publication 2002/0040212A1, is cited for showing an absorbent core in a sanitary napkin with beads/spacing means which create fluid-conducting channels between barrier strips in a direction from center of sanitary napkin to longitudinal sides. The Karami reference, US patent no. 4,027,672, is cited for showing an absorbent article with alternating parallel strips of high and low density areas for liquid distribution but no void or spacing means.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura C. Hill whose telephone number is 571-272-7137.

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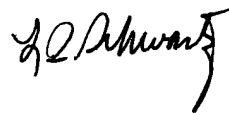
The examiner can normally be reached on Monday through Friday (off every other Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Schwartz can be reached on 571-272-4390. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Laura C. Hill  
Examiner  
Art Unit 3761

LCH



Larry I. Schwartz  
Supervisory Patent Examiner  
Group 3700